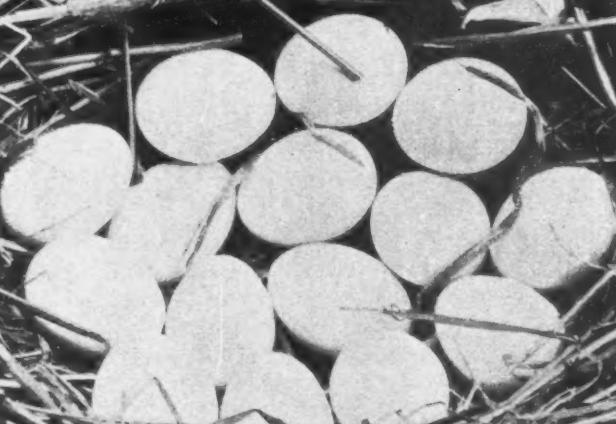


Vol. 3.

MARCH, 1906

No. 6.

The Cornell Countryman



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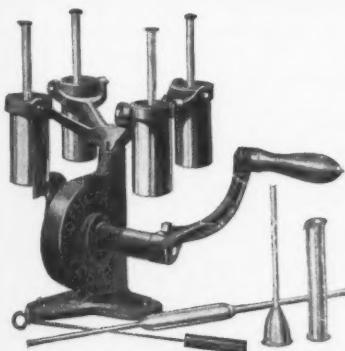
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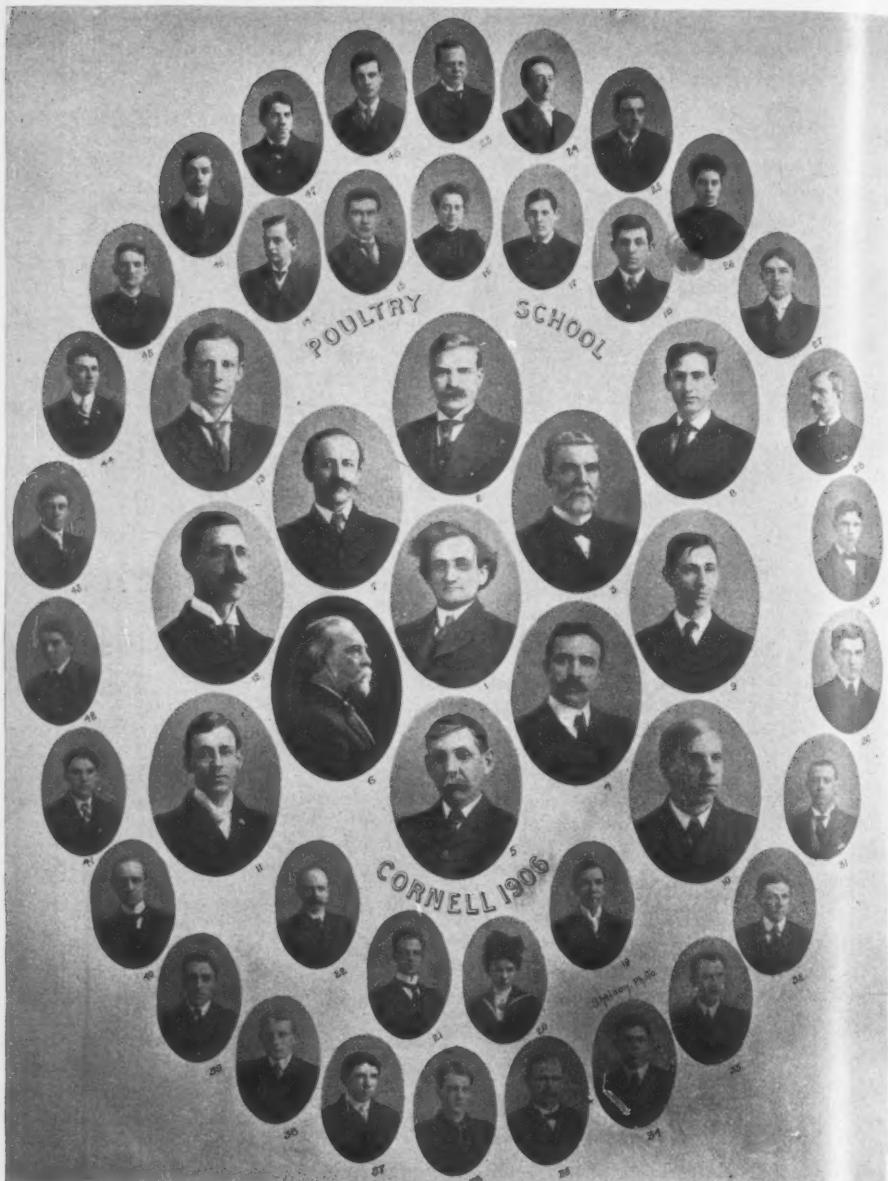
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NO. 6

DOES PURE BRED POULTRY PAY?

By T. F. McGrew

IN grandfather's time if the hens produced twenty-five or thirty eggs during the year, and the greater portion of these in the spring-time, it was all that was expected from them. These were known as the dung-hill or barnyard fowls. About 1867 the era of progress of poultry husbandry in this country commenced. If our information is correct, the Census of 1870 gave an average of about 30 eggs per hen per year from the limited information gathered. Thirty years later the Census Report credits about 70 eggs per hen as the average product of the United States. All of this increase has come from the one source of better poultry created under the influence of the fancier, who pays special attention to what should be known as "Standard Bred Poultry."

In the egg-laying contest, conducted under either private, State or National control in this country, Australia or England, there has never been recorded to our certain knowledge an instance where mongrel or cross-bred fowls won the laurels or came anywhere near doing so. The best market poultry, the most successful poultry plants, the most successful egg-producing hens, the best turkeys and water fowls of all kinds are those bred direct from some one of the many standard bred varieties.

If there is anyone who can gainsay these statements and prove us in error, let them do so, but so long as there can be no contradiction to these facts, why should any one in the wide, wide world continue to harbor cross-bred mongrel stock in hopes of making

a profit therefrom, when the evidences are so overwhelming that only those who keep properly selected stock for the purposes intended, make money from the growing of poultry.

The best egg-producing hens, the best meat-producing hens, the finest of market turkeys, ducks and geese come into our markets only through the existence of the Standard bred poultry. We have not in all our experience known of a single instance where "even value received in the keeping of poultry came from the possession of the common barnyard stock," and in every instance of profit and success the groundwork or foundation of same is from some one or more of the standard bred varieties. The expense of possessing good stock of this kind is so slight as to prevent no one from having the same. Gradually from any farm every single head of the old-time, ante-dated unvaluable stock can be sold, and the money received for same expended for some of the better kinds that any one can hope to succeed with. These are facts that cannot be gainsayed or disputed. Every one familiar with the growing of poultry fully realizes this to be the condition. With this overwhelming proof all in one direction, how it can be possible for the agricultural interest of the country to cling to a single old-fashioned hen in hopes of gaining something from her, is more than any of us, who are familiar with the situation that governs conditions which have increased the poultry products of this country from a mere pittance to over \$500,000,000 per year can understand.

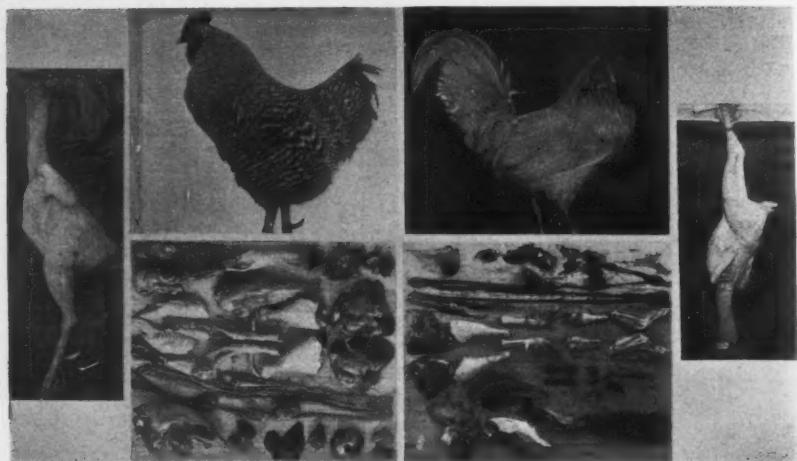


FIG 1.—Barred Plymouth Rock and White Leghorn Males, alive, dressed, and dissected. Observe variation in type and comparative size of parts.

COMPARATIVE ANATOMY OF THE BARRED PLYMOUTH ROCK AND THE WHITE LEGHORN TO SHOW TYPE DIFFERENCES

By C. A. Rogers, '05.

THE accompanying photographs (Fig. 1) serve to illustrate the strong contrast between the large, compact, meaty Barred Plymouth Rock and the small, sprightly, light-weight White Leghorn. The broad high back and the deep chest and rear of the Rock furnish a very striking contrast to the long slender narrow back, and narrow chest of the Leghorn.

Perhaps the most pronounced contrast is apparent when these fowls are dressed and exhibited side by side. At first glance we see the Rock stands out with a deep short body and long extremities and the White Leghorn with a long thin body. Attention is drawn, however to the quite prominent breast muscle of the Leghorn which is exceptionally large and perhaps this accounts in large measure for the popularity of the White Leghorn as a broiler.

After studying several individuals of each breed the following average measurements were reached. The intestines of the Rock measure 70.5 inches, while that of the Leghorn was

only 55.9 inches. The caeca in the Rock measured 7.2 inches and in the Leghorn 6.6 inches. The percentage of the dressed fowl to the live weight in the case of the Rock was 90.50 per cent, while that of the Leghorn is 86.80 per cent. In like manner the percentage of the edible parts of the Rock is 75.49 per cent, and that of the Leghorn 66.55 per cent. Again the percentage of the waste parts of the Rock is only 13.42 per cent in contrast to 16.45 in the Leghorn. Further comparisons are as follows:

MALE.	
B. P. R.	W. Leg.
Live Fowl.....	100.
Feathers	5.16
Blood	3.84
Dressed fowl	90.50
Edible parts	75.49
R. Arm 1st joint..	1.63
R. Arm 2nd joint..	1.88
L. Arm 1st joint..	1.68
L. Arm 2nd joint..	1.92
R. Leg 1st joint..	7.66
R. Leg 2nd joint..	6.52
L. Leg 1st joint..	7.92
L. Leg 2nd joint..	6.39
Entire breast	16.50
Left pectoralis	7.53

Back, rump and neck	19.80	17.25
Heart58	.54
Liver	1.54	1.50
Gizzard	1.42	2.00
Total waste parts.	13.42	16.45
Lungs58	.46
Kidneys45	.65
Head	2.45	5.23
Shanks and toes ..	5.86	5.43
Testicles73	.30
Offal	4.66	5.89
Lost weight	1.77	5.48

These tabulations seem to give a decided advantage as an economical meat fowl to the Barred Plymouth Rock.

Referring to the illustrations of

muscle texture (Fig. 2) the network of lighter color represents the perimysium or connective tissue. Within this perimysium are seen the nerve bundles, arteries, and blood vessels which supply and care for the cells in the fibers of the muscles. Any part of the muscle enclosed by this perimysium is known as a fascicle. The fascicles contain the individual fibres between which there is a connective tissue called endomysium.

The perimysium and endomysium compose the objectionable part of the meat, the tough part. When the mus-

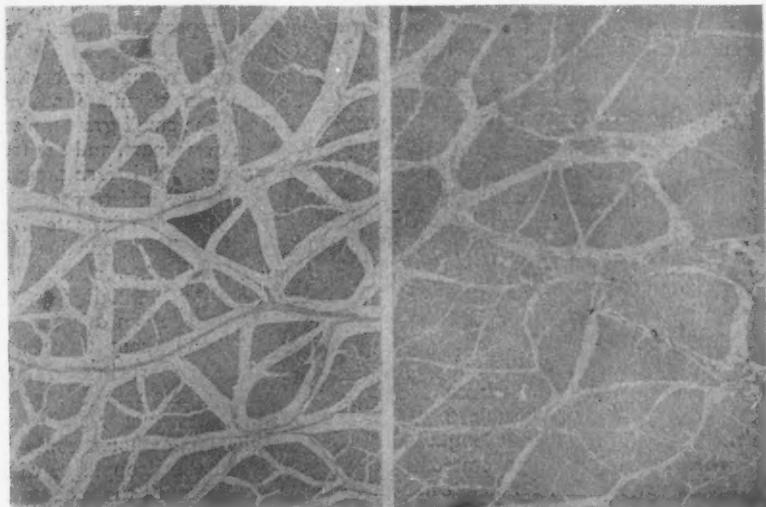


FIG. 2
Cross Section of breast muscle of White Leghorn and Barred Plymouth Rock males respectively. Notice larger amount of connective tissue in fig. 3, and comparatively small size of the muscular bundles.

cle is only partly cooked, the perimysium and endomysium are especially tough, but when properly cooked they become like gelatin. In either case there is much less nourishment in these connective tissues than in the fascicles, consequently the greater the proportion of perimysium and endomysium to the fascicle, the tougher and coarser will be the meat and the less nourishing.

A careful comparison of sections of the muscles points out clearly that the meat of the Rock contains a larger amount of fascicle or solid meat fiber

in proportion to the amount of perimysium and endomysium than does the meat of the White Leghorn. Consequently we may infer that the meat of the Rock is tenderer and more easily prepared for eating than the meat of the Leghorn, provided of course that the conditions of fatness, health, etc., are equal.

[The above article is a brief statement from a thesis prepared by the author for a Masters' degree in Agriculture, in the preparation of which 27 individuals representing 6 varieties of poultry were dissected and studied.—Ed.]

SOME OF THE WHYS OF THE FRESH AIR POULTRY HOUSE

By Ellis M. Santee.

SO much nonsense has been said and written (and I have done some of it), upon the subject of having the conditions in our poultry houses more nearly approach those of our own houses, and poultrymen have so thoroughly learned the bitter lesson that too much warmth is bad; and there is now danger of the pendulum swinging too far the other way, thus losing the greater part of the good accomplished by the agitation that it may not be unprofitable nor out of place to briefly consider why we cannot profitably adopt our own surroundings to the needs of our fowls.

The need of a plentiful supply of oxygen is common to us both, but in the hen in a much more exaggerated amount, for the reason that the hotter the fire, the more oxygen is consumed and the little hen must consume enough fuel, combined with the oxygen of the air she breathes, to keep the normal temperature of her body up to about 106° Fahrenheit, while we get along very comfortably upon 98.6.

Nature gave her an overcoat of feathers that makes it possible to retain the heat for the greatest length of time when once she has generated it, thus making it possible for her to depend almost entirely upon the heat from within.

It is not because of the cold, but in spite of it, that the cold poultry house has and is proving more profitable. It is due to the fact that cold air contains less moisture and more oxygen.

The danger from the cold house is

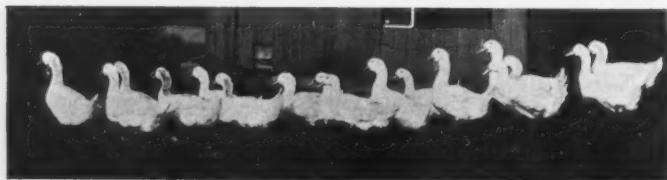
two-fold; first from the manner of its construction, and second, from the manner of its use.

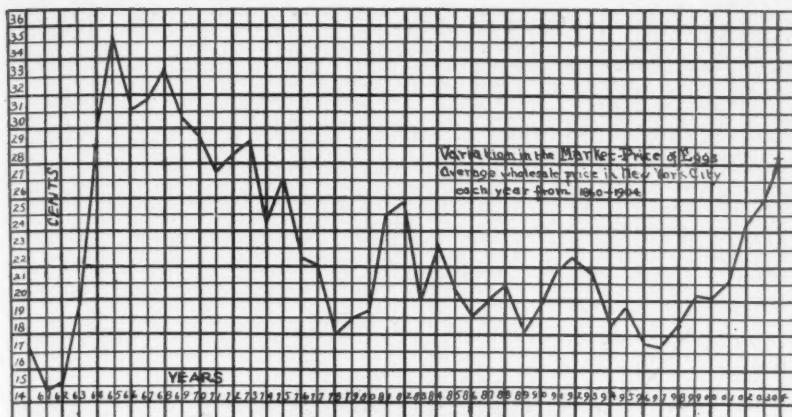
We are too apt to think that a crack more or less in our houses will do no harm so long as we want plenty of fresh air anyway, and thus we get the profit consuming, death dealing draught. Strange as it may seem, the house that is supplied with plenty of pure air through a muslin curtain, requires to be more nearly air tight in every other respect than any other kind of a house.

In the use of this house, everything must be done to stimulate activity; the deep litter, the small grains, plenty of sunlight in every part, and the fresh pure water constantly before them.

Then there is the moisture problem that we can almost eliminate from consideration in building our dwelling-houses, but which must receive almost first consideration in building our poultry houses. We pen our fowls in October and keep them there until March, each day carrying in large quantities of moisture in the water, the food and the air, never taking any out, except the small amount contained in the egg and the droppings, which are too often left until the moisture is nearly all dried out.

After six years' use of the muslin curtain, I am well convinced that it, more nearly than any other one thing, solves our most perplexing building problems; but it must be used in an otherwise tight, low house with some glass for best results.





MARKET PRICE OF EGGS

By Henry Jennings, Sp.

IN the study of the market price of Eggs from 1860 to 1904, the highest weekly quotations of the New York Market, as given in the *The Country Gentleman*, were taken as furnishing the most reliable data available.

From the data collected, tables were prepared showing monthly averages. From these tables it is seen that with few exceptions May is the month of the lowest average prices, and December the month of the highest, though the highest quotations may occur in November, December, January and in some cases February. The time of the highest prices seems more variable as to date. From these monthly lists yearly averages were obtained and are shown by the chart and accompanying figures. There has been considerable variation, although the fluctuations have been more gradual than is generally thought to be the case.

Although in some cases the variation in value may seem to be quite marked it is not so great but that it can be partially explained by a short period of scarcity and resulting high prices. However, I have no direct proof that this has actually occurred. The time of the highest yearly average was directly following the Civil war, when the prices reached the remark-

able value of 35.42 cents per dozen. Of late years the highest average was in 1904 when the prices went to 28.45 cents per dozen.

Taking a general summary it seems that the fluctuations in the average value of eggs is not as wide as is ordinarily thought. The causes for these fluctuations in weekly, monthly, or even yearly values is probably entirely influenced by such things as temperature and general weather conditions, or the variation in the value of the chief grains used for egg production. By a careful study of these causes it might be possible to determine which one of the three was responsible for the fluctuations.

MARKET PRICE OF EGGS. Yearly Average.

Year.	Price.
1860	17.56
1861	14.84
1862	15.22
1863	19.91
1864	29.17
1865	35.42
1866	31.06
1867	31.43
1868	33.32
1869	30.85
1870	29.69
1871	27.35
1872	28.43
1873	29.23
1874	24.63
1875	27.03
1876	22.49

1877.....	22.11	1894.....	18.41
1878.....	17.94	1895.....	19.69
1879.....	19.09	1896.....	17.58
1880.....	19.41	1897.....	17.35
1881.....	25.07	1898.....	18.64
1882.....	25.74	1899.....	20.35
1883.....	19.69	1900.....	20.27
1884.....	23.22	1901.....	21.25
1885.....	20.71	1902.....	24.55
1886.....	19.05	1903.....	25.71
1887.....	20.05	1904.....	28.45
1888.....	20.80		
1889.....	18.23		
1890.....	19.49		
1891.....	21.68		
1892.....	22.41		
1893.....	21.67		

The average struck from these yearly averages shows the price for the entire series of years to be 23.05 cents per dozen.



White Muscovy Ducklings

A DOWN EAST DUCK RANCH

By F. G. Thayer, Sp.

TO the observer the sight of thousands of White Pekin ducks is a sight not to be forgotten. At the same time there is no branch of poultry keeping where visitors are less desired than on a large duck ranch. The Pekin duck is probably the most timid of all the domesticated ducks and strangers as a rule are prohibited from visiting on this account; as all stampeding, scaring or otherwise disturbing the duck causes loss in flesh, vitality and profit.

The duck business of today is probably one of the most firmly established profit paying branches of poultry husbandry. But there is no branch of poultry farming where failure is so certain when proper methods are not followed. It requires a large outlay of money and a large and varied hus-

bandry experience. It takes time to develop a market and know when and where to ship your duck to an advantage.

The substance of this article is based on practical experience on Weber Bros.' Duck Ranch of Wrentham, Mass. They are located 23 miles southeast of Boston, Massachusetts, on good state roads running between Providence and Boston within easy access of the depot. The ranch is situated in a valley where it is extremely cold in the winter and very warm in the summer. The land is hilly. Very few mechanical devices are used for saving time and money except that the water that is used on the place is pumped by means of a gasoline engine and a windmill through pipes to various houses and yards. The ducks have

water for drinking only, being reared without any water for swimming. They are watered in large troughs for the large ducks and in small fountains for the young ducklings. The water must be changed occasionally for ducks will not drink luke-warm water. The two feed houses are centrally located thus economizing in labor to a large extent.

The management makes it a practice to carry 400 head of breeding stock throughout the season. When selecting breeders only well matured, sound, vigorous stock is desired. They must be broad backed, good lunged, strong in their feet, not too fat, and without lopped wings. These breeders are given a green run in a large orchard where they receive the best of care and are not forced in any way. They are selected occasionally and poor ones put into the fattening pens to get ready for the market. The breeding house is divided up into pens with 20 ducks and 5 drakes to a pen. Each pen having a sloping run connected with it.

During the cold winter months the house is heated so as to take off the chill and keep the ducks comfortable and the eggs from freezing. It has been found in practice, that fat ducks lay less eggs and less fertile ones and those which do hatch are low in vitality.

Incubators are used exclusively for hatching. Both hot water and hot air machines are used. The average hatched of fertile eggs ran very high and of very good vitality. The mortality was very small. The eggs are turned twice daily. The incubators are ventilated whenever needed from sides and top and never from top and bottom at the same time because it cools off the eggs, dries them up, and causes a draft. More ventilation is given on the eleventh day.

The hot-water machines are run at 102° F. throughout the hatch with the thermometer on the eggs and the hot air machines at 102° F. above the eggs. Moisture was applied to the hot water machines but none to the hot air ones. It is a good practice to keep the

cement floor wet down constantly as it keeps the air moist and does away with some adding of moisture to the machines. The incubator house was built underground with overhead ventilation and end ventilation by means of a muslin curtain. All windows were whitewashed so as to shut out all possible sunlight and to keep the air within at as even a temperature as possible. To further help this along and afford a good ventilation shutters are used on the windows.

Hatching is generally commenced along in January and February and lasts until the latter part of July when the fertility runs low.

From the incubator house the ducklings are removed to the nursery, which is heated by hot water and is 273 feet long and 12 feet wide. It is divided into 73 pens. There is a narrow walk next to the hover, which makes work more convenient. The pens have new sawdust daily. The young ducklings are kept near the hover at first and then they are gradually allowed a run as far as the house permits. During the first week they are not allowed out doors at all. They are kept in the nursery until they are two weeks old when they are removed to the large brooder houses where they are given more room, but still in hot water heated houses. They are kept here until five weeks old when they are removed to the cool brooder houses where they receive no heat at all. In the yards are shelters where the ducks may keep cool during the daytime when houses are too warm. They are kept here until they are eight weeks old when they are moved into the fattening sheds. These fattening sheds are composed of V-shaped buildings, with sides open and yards on both sides. They are fattened here and then driven to the slaughtering pen from whence they are killed for market. They are from 10-14 weeks old when killed.

The breeding ducks are fed a mash morning and night with a little whole corn at noon. The mash consists of cornmeal, bran, flour, meat scraps with

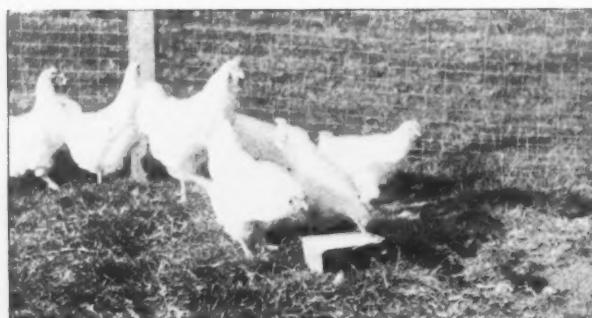
some oyster shell and grit mixed in. Plenty of finely cut green material is also used. Carrots and cut alfalfa is used in the winter and is found satisfactory.

Newly hatched ducks are fed crackers, eggs, rolled oats and grit for 5 times or one day. They are then changed to a feed of rolled oats, scalded corn meal, bread crumbs. This is fed for 3 days when the rolled oats is gradually increased and this fed for ten days. They are fed five times daily and always watered before feeding to avoid choking of the ducklings. After this they are fed corn meal, 150 lbs.; bran, 3 bu.; flour, 95 lbs., and meat scraps 33 lbs., with occasionally linseed oil meal, pinhead oat meal and screenings from breakfast foods. To all of this is added finely cut green food. The green food is practically all raised on the farm. This includes red clover, rye, rape and corn. This was all ground by a hand ensilage cutter. The ducks were fed sparingly morning and noon and at night they were given as much as they would eat and a little was left on the feeding boards. The feeding hours were 6—9—11—1—5 when using five feeds a day, which diminished to three feeds per day after five or six weeks old. The ducks were fed especially for fattening from one to two weeks before killing. At night they were fed on a "fatter's food" consisting of 100 lbs. corn meal, 66 lbs. flour and 60 lbs. meat scraps with plenty of green food mixed in.

The ducks or ducklings are all dry picked. They are first stunned with a stick on the head and then stuck in the throat through the mouth which severs the large blood vessels. From there to the picking place the operator pulls out the tail feathers and throws them on the floor. He then places the head of the duck between his leg and picking box and commences to pick the feathers from breast first and then from back. He separates all the feathers into their relative classes. He picks to the first joint on the wing. When the feathers are all off the ducks they are shaved with a sharp concave knife to remove all pin feathers that could not be removed otherwise. The carcass is then cooled in ice water to remove all body heat. They are shipped in early part of season to the New York markets and later to the Boston market. They are packed in barrels for New York and in boxes for Boston.

The pickers will average 50 ducks per day and some of the pickers have picked as high as 78 in one day of 10 hours. They receive 7 cents per duck for picking. The feathers are saved and shipped to various cities. They were bringing 48 cents per pound in 1905.

Lanterns are hung in all the houses and yards so the ducks will not stampede or be afraid during the night. All the yards are plowed up each fall and sown to rye.





Poultry Students Making Egg Crates for Family Trade.

POULTRY FOR WOMEN

By Mrs. Geo. E. Monroe.

Of the many employments open to women, few offer the freedom, health and profit that poultry keeping does. But even greater than these considerations has been the pleasure of the work to me. While poultry keeping is a business made up of many details, yet it can be managed so one can spend many hours away and everything go on well. One is not tied to an office desk, so many hours; nor shut up in a factory under a "boss;" nor confined by the drudgery of house work from dawn till dark. The work can be done in the cool, morning hours, then during the heat of the summer days, and the long afternoons, one can read or sew, or go to the club, while the evenings are always free.

The work does not, like office work or some occupations call for any expensive wardrobe for it is rough and dusty work. Poultry work is not, as Samantha Allen said about matrimony, "all sitting on a rainbow and eating honey."

Sometime ago I received a letter from a teacher, who wished to come

and learn by actual work with the fowls, what I could teach her about poultry. This young woman said she would need to be paid for her services, as she supported herself and mother. I couldn't be bothered.

She really wished to learn the business for the income it would bring her. I advised her to give up the city school where she found the work too hard, take a village school where the work would be easier and a place to establish a small number of fowls might be easily found, thus learning the new business before giving up the old. In her case the mother could help her look after the chicks.

As one grows into the knowledge of the chosen breed (for one breed is enough even for a woman) the birds can be advertised and exhibited at some local shows and this will bring acquaintances among other poultry keepers among whom one will make life long friends.

The greatest profit comes in knowing how to feed what is at hand in combination with what is lacking, which must be purchased and in put-

ting the finished product upon the market at the time it brings the best prices. Whether it be eggs and meat for market or eggs for hatching and birds for exhibition,

For the woman who cannot give enough time to the poultry business to manage a plant for market eggs and fowls, there are many side issues, one of the most profitable being the raising of fall chickens. These can be hatched at home, or purchased by the hundred at almost any town fair in the country. These chickens can be bought in the fall for what one would pay for the eggs in the regular hatch-

ing season. At this season the weather is pleasant for the worker, and for the checks there is plenty of grass, bugs are plentiful and the ground covered with grain and weed seeds.

The pullets hatched in September would lay in March and the young males either castrated or sold for soft roasters, if they had not been disposed of earlier as broilers.

Volumes might be written about what a woman could do with poultry, but first she must learn the business, either by slow experience or at a school where Poultry Husbandry is taught in all its many branches.

HEN NO. 1 BUFF COCHIN 10 CHICKENS HATCHED

1st Day	2nd Day	3rd Day	4th Day
1-2-3 4-5-6-7 8-9-10 11-12-13 14-15	7-3 5-6-8 10-13-15-12-1 2-9-14 11-4	3-5 13-7 6-2-4 10-15 12-9-11 1-14-8	5-15 8 6-13-12 11-4 7-1-9 14-2-10-3
5th Day	6th Day	7th Day	8th Day
2 3-11-8 4-5-1-9 12-7-15-6 13-14-10	15-8 4-2 10-3-6 7-9-13-5 1-11-12 14	4-8-2 1-10-9 5-6-15 11-7-3 -13- 12 14	14-15-7-1 6-11-3 9-8-10-2 13-4-5 12
9th Day	10th Day	11th Day	12th Day
2-6-10-5 8-3-12-7 1-11-15-14-4 9-13	4-15-6 2-7-10-8 1-14-3-12 11-9-13 5	14-7-1-4 10-12-2 8-11-9-13 3-6-5-15	13-7-4-1 8-3-2-11 10-14-12-9-5 15-6
13th Day	14th Day	15th Day	16th Day
5 13-6-4 11-1-9-7 12-10-8-15 3-2-14	11 9-7-8 13-3-6 14-15-5-2 4-12-10 1	9-7-3 11-13-15 12-8-5 10-4-14 1-2-6	7-13-3-15 8-11-10 6-4-2-9 14-5 12
17th Day	18th Day	19th Day	20th Day
5-15-9 7-2-4 1-3-10 12-13-11-6 8-14	5-12*-9 7-4-2 11-14-6 10-8-13 3-1 15	5 1-10 *2-4-6-3 7-8-4 13-4 11-15	9-15 4-11-1 7-6-13 8-10-3-14 5

*Egg broken

HOW FREQUENTLY DOES THE SETTING HEN TURN HER EGGS?

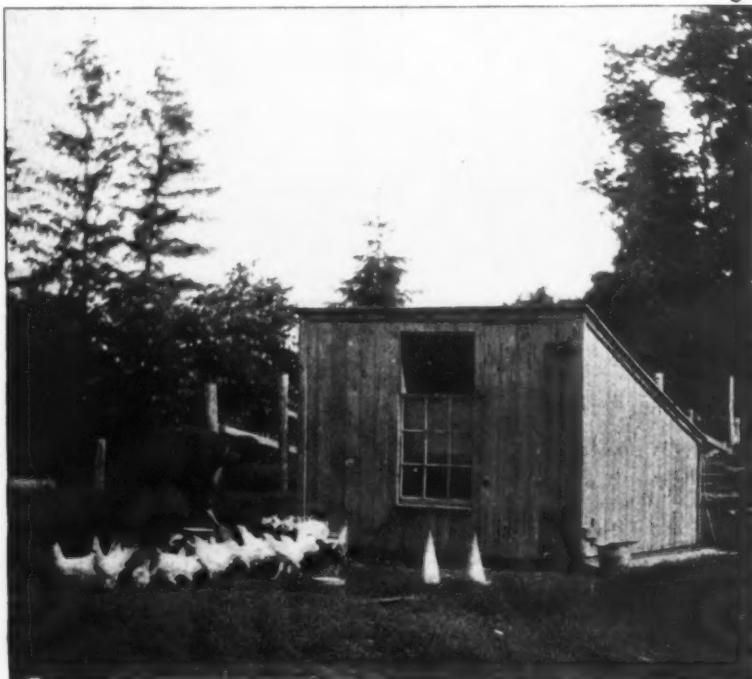
By H. F. Prince, '07.

MUCH has been written about the turning of Eggs during the period of incubation. Opinions differ widely. The preceding figures describe an effort to find out how frequently eggs are turned by the natural method. The old hen seems to be a pretty reliable authority, and the attempt was made to let her answer the question herself.

Most of us have noticed a setting hen just before she settles down on the nest. She will thrust her head under her body, rustle the eggs around, straighten up and finally settle back with an air of contentment and a willingness to rest for another twenty-four hours.

Four hens; two Rhode Island Reds, one Plymouth Rock, and one Buff Cochin, were placed on fifteen eggs each. Each set of eggs was marked with numbers from one to fifteen. If

an egg was broken a star was placed by the number and dropped from the succeeding records. The hens were taken off each evening with the exception of the first, between five and six o'clock and fed. While the hens were eating, the position of each egg in the nests was noted. The results were surprising. In every instance it appeared that each egg had been moved during the preceding interval. Moreover the eggs did not remain in the same part of the nest for more than three days. The only times I observed the hens changing the position of the eggs was in the evening after they had returned to the nests. The thorough manner in which the hen turns the eggs may well furnish us a clue to the most natural and proper treatment of the eggs when under the artificial conditions of the incubator.



The Colony brooder houses have many advantages over outdoor brooders. This one at Cornell University provides both a glass and a cloth window.

THE POULTRY INDUSTRY IN THE EMPIRE STATE

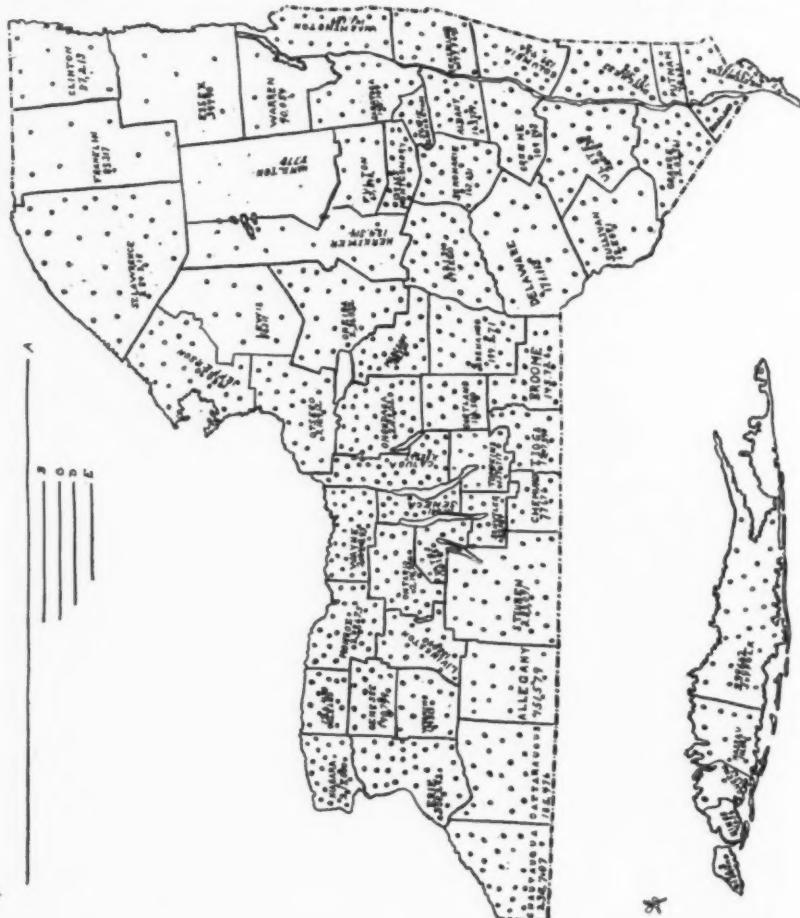
By Lewis J. Elwood, Sp.

THE object of this article is to show the relative importance of the poultry product as compared with the other leading agricultural products and to show the parts of New York State in which most poultry is kept.

In making the comparison it must be remembered that New York State does not lead in poultry products, while it does in some others. It ranks first in dairy products and potatoes, second in orchard products, sixth in oats, which is our leading cereal crop,

and only seventh in poultry products. The rank of the first seven states in value of poultry products is as follows: Illinois, \$20,250,000; Iowa, \$19,508,526; Ohio, \$19,127,778; Missouri, \$17,840,625; Pennsylvania, \$16,231,968; Indiana, \$15,614,937; New York, \$14,791,491.

The length of the lines in the cut is in proportion to the value of the products. It will be noticed that with the exception of the dairy industry which includes butter, cheese, milk and skim milk, the poultry product compares fa-



vorably with others. The values of the principal products in this state for the year 1890 are:

Total dairy products.....	\$55,474,155
Potatoes	15,019,135
Poultry	14,791,491
Oats	12,929,092
Orchard products.....	10,542,272

From the map one will observe that there is more poultry kept in the western part of the state than in the eastern and more along the lines of railroads. The figures were taken from the census report of 1900 and this does not consider poultry which is kept within village limits nor the poultry under three months old. If the total number was to be estimated the cen-

sus figures would have to be increased by at least 40 per cent.

A SETTIN' HEN

When a hen is bound to set,
Seems to me taint etiket,
Dousing her in water till
She's connected with a chill.
Seems to me 'twas scursly right,
Giving her a dreadful fright;
Tying rags around her tail,
Pounding on an old tin pail.
Chasing her around the yard
Seems as if 'twas kind of hard;
Bein' kicked and slammed and shooed,
Cause she wants to raise a brood.
I should think 'twas getting gay
Jes' cause Natur wants her way.

Anon.

THE STATUS OF POULTRY HUSBANDRY IN AMERICA

By J. Demary, Sp.

POULTRY Husbandry as a distinct branch of agriculture is a feature of modern times. The keeping of fowls has been one of the farm industries for centuries, but its importance has not been realized until recently. Artificial incubation was known and practiced by the Egyptians and Chinese thousands of years ago, but not until the modern incubator reached a high state of development was there any definite attempt to study the common breeds of fowls and by systematic breeding render them of more use to mankind.

Since the use of incubators placed the rearing of fowls more directly under the owner's care and attention, it followed that better knowledge of the industry would be obtained than under the easy going methods of the past. The present great and increasing interest that is being taken in Poultry, is largely due to the diffusion of this knowledge through the various books, bulletins and articles that are written upon this subject.

As the "rules of the game" became more definitely understood, the occupation assumed more dignity and at

present it ranks equally with the other branches of Agriculture.

The teaching of Poultry Husbandry has also assumed great importance and it seems to open a profitable field of work to those who will make a careful study of the industry in both its theoretical and practical phases. Too much stress cannot be laid on the latter point, for in the keeping of poultry, the "personal equation" is of the greatest importance.

Considering the growing importance of the industry the fact that the Experiment Stations have given so little attention to the matter is hard to understand. Statistics show that some of the Western States have a very high rank in the value of their poultry products, but so far very little work has been done along this line by their Stations. A careful study of the replies to a circular sent out by the Cornell Department of Poultry Husbandry, shows that of the 45 stations returning answers, only 12 were giving some form of instruction, ranging from a few lectures, to an eleven weeks Short Course, besides issuing bulletins on the subject.

Three stations issued only bulletins

and of the remaining 30, none of them had considered the industry of sufficient importance to justify investigation. In a few cases while nothing was being done at present, a hope was expressed that funds might be available in the future, for such work.

The Colleges that give instruction in Poultry Husbandry are widely separated although most of them are in the North Atlantic States. They are Maine, New Hampshire, Massachusetts, Rhode Island, New York, Connecticut, Delaware, Minnesota, Missouri, Kansas, Oklahoma, Arkansas and California. The nature of the instruction, aside from the special Short Courses, consists for the most part of lectures given in connection with the general Agricultural Course, a special feature not being made of it. The Short Courses, some of which are being given this season for the first time, are from two to eleven weeks duration, the shortest periods consisting of lectures by some well known poultrymen, and the longer being filled with an additional amount of practical work with fowls and incubators.

The capital invested by the various Colleges ranges from \$100 up to \$8,000. New York State has the largest amount invested in poultry instruc-

tion and investigation, there being a large Poultry Department at Cornell University devoted largely to instruction, and a large poultry plant at the Geneva Experiment Station which is devoted entirely to investigation. Considering the investment, Rhode Island comes second to New York with Connecticut a close third. Maine has about \$2,000 invested, and most of the other Colleges have a few hundred dollars in houses and fowls. The Ontario Agricultural College leads either Cornell or Geneva if considered separately, but not if taken together.

The number of students receiving instruction is hard to estimate since the lectures are given in a general way. Short Courses in Poultry are given by New York, Rhode Island, Connecticut, Maine, Delaware, Indiana, Pennsylvania, Missouri, and California; with the most complete equipment at the first four. Maine and Connecticut offer a six weeks course, and Rhode Island and New York an eleven weeks course for 1906.

The attendance at the Short Course at Cornell this year is thirty-five, at Rhode Island twenty-five students, Connecticut twenty and Guelph, Canada, twenty-three.



Love your hens and your hens will love you. Even Leghorns will be friendly.

POULTRY PRACTICE AT CORNELL.

Students Washing Fowls for the Annual Poultry Show.

A Section in Caponizing.
Laboratory Practice. Study of the Egg.



The Cornell Countryman

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Alumni Editor

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MARCH, 1906

Two Grand Opportunities for the American Poultry Association.

THE influence which the American Poultry Association has exerted for the systematic classification and breeding of pure bred poultry is beyond calculation. It has accomplished a large and important work in the publication of the American Standard of Perfection. But it has not done its whole duty. Two important fields of usefulness remain undeveloped and unattempted. First is the field of influence for the promotion of education and experimentation in Poultry Husbandry. The time is opportune for the Association to act. It should undertake immediately the Herculean, but not impossible task, of convincing the agricultural colleges and experiment stations that they have not been giving but should now give, just recognition to the interests of poultrymen. It is in the best position of any organization to do this. It is a National Association and is the largest body of organized poultrymen in America. Will it improve the opportunity?

The battle should be fought in the open. The ammunition should be the plain facts which show the value of poultry products in comparison with those of other branches of farming.

Alongside of this should be shown by comparison the actual amount of money which the agricultural colleges and experiment stations are annually expending for Poultry and for the various other agricultural industries. With this should be shown the relative number of persons who are in some way engaged in Poultry Husbandry compared with those occupied in various other agricultural occupations. However, the most important claim which poultrymen have for a just share of assistance from those whose business it is to solve the problems of profitable poultry production is the great desire and need for definite reliable information, which only scientific investigation can supply.

The second opportunity for the A. P. A. is of no less importance. The work of the Association while good, has been one-sided. It has devoted practically its whole attention to encouraging the development of pure bred poultry. The time has come when it should broaden its field of usefulness. It should offer effective assistance as an educator in matters which have to do with the actual care and handling of poultry.

To this end, an educational program should be prepared for each annual meeting of the Association and possibly for additional meetings, where the subjects of building poultry houses, feeding, breeding, scoring, judging and rearing poultry should be ably presented and thoroughly discussed by the best authorities. This policy is similar to that adopted by practically all other organizations. Such a program would increase the attendance upon the meetings, widen the sphere of usefulness, attract to its membership a great body of poultrymen who

otherwise would not be drawn to the Association. Very few members of the A. P. A. feel that they can travel long distances at large expenditure of time and money to attend the annual meeting. This is proven by the small attendance. The treasury is in a healthy condition which would warrant the expenditure of some money for the purpose stated. It is probable that the colleges and experiment stations, the directors of farmers' institutes and others who are interested in the agricultural uplift in the various states, would heartily co-operate with the American Poultry Association in providing speakers. In line with the above policy, the Association should prepare and have incorporated in the American Standard of Perfection a set of rules for exhibiting, judging, and scoring live poultry for utility, dressed market poultry and market eggs. Such an innovation would be an epoch making policy in the history of the American Poultry Association. It is the hope of the *Cornell Countryman* that all who are interested in the welfare of the American Poultry Association will use their best efforts to widen its influence so that it shall appeal to all classes of poultrymen everywhere.

**The
Poultry Press**

THE long list of poultry papers mentioned elsewhere in this issue, is worthy of careful consideration. It may be taken to illustrate a healthy condition in Poultry Husbandry. It shows that poultrymen are good readers. It indicates also that poultrymen are prospering; otherwise so many specialty publica-

tions would not receive profitable support.

The past four years has seen marked improvement in the quality of poultry publications. We now have several really high-class poultry journals. This improvement is partly due to the readers. They, as well as the editors, make a poultry paper. They do this in a direct visible way by their subscriptions and their advertising, but back of it all is the demand of intelligent readers for readable, reliable, useful information. Poultrymen are thinking. They appreciate good poultry literature. The poultry paper of the future that wins out must recognize this fact. With this recognition will come a realization that the average reader is a good deal more concerned about the questions, how to build poultry houses, how to feed and breed poultry, than he is in what one editor "thinks" of another. In other words, what is now wanted is instructive not destructive journalism.

The prospect is bright for the poultry editor who realizes the real need of poultrymen. Poultry Husbandry is on the flow tide of prosperity. The ebb tide is a long way off. The fact that there never was a time when poultrymen could make more money in the various branches of Poultry Husbandry than now is the reason why the poultry editors should rejoice. The prosperous poultryman advertises and subscribes freely and pays the bill promptly.

All success to the up to date poultry papers. May their circulation and their influence for good increase and may all who keep poultry realize that money spent for several good poultry papers or agricultural papers with live poultry departments, will be their best paying investment.

REGISTRATION IN POULTRY HUSBANDRY IN CORNELL UNIVERSITY

	1st yr. 1903-04	2nd yr. 1904-05	% Inc.	3rd yr. 1905-06	% Inc.
Total No. students registered one year	27	60	122+	71	18+
cours's					
Total No. hours University credit	79	173	119+	229	32+
Total No. students registered, Course					
37	27	53	96+	55	3
Afternoon Practice 38 A	22	31	49+	42	35+
Morning, Noon and Night 38 B	3	16	500	29	81+
Seminary (Advanced Course) 39	0	7		14	100
Post Graduates for M. S. Degree Minor					
Subject	0	0		1	0
Seniors—Thesis	0	0		2	0
One Year Specials in Poultry Husbandry	0	0		3	0
Winter Course	0	17		35	105
Electing Poultry from the other Winter Courses	30	30	0	41	36+
Total No. of Students taking some form of Poultry Instruction at one time	57	107	46+	147	37+

**The
Editors' Table**

THE Editors of the *Countryman* have taken especial pains to make this, the annual poultry issue, especially interesting to all poultry raisers. We take pleasure in presenting to our readers a line of articles, most of which represent the original investigations of students in the Cornell Department of Poultry Husbandry.

We shall be pleased if other publications will do us the honor to clip freely from our columns provided of course that proper credit is given to the authors and to the *Cornell Countryman*. To some this request may seem unnecessary and presumptive, but in view of the fact that a contemporary publication has recently copied two leading articles from this paper withholding all credit and leaving the reader to infer that the articles were original with them, we deem it excusable to call attention to our copyright.

**The Poultry-
man's Problem's**

IT is to the shame and discredit of Agricultural Colleges and Experiment Stations that the poultrymen have been left to work out

their own salvation. Practically every modern improvement in method and practice in Poultry Husbandry has been suggested and developed by individual poultrymen through the expensive school of experience. A new era is dawning for Poultry Husbandry. The Agricultural Colleges and Experiment Stations, long dead to the interests of poultrymen are at last awakening. Some of them have opened their eyes, rolled over and gone to sleep again. Some are shutting first one eye and then the other, trying to make themselves think that they are awake when in reality they are only dreaming, and most of their dreams are of large dairies, orchards, and fields of waving grain. The great majority, however, are sleeping serenely, wholly oblivious to the crying needs and just demands of the great poultry interests, aggregating \$500,000,000 worth of poultry products in the U. S. It may be said to the credit of three or four states that they are now apparently making an honest effort in a small way to give to the poultry interests what has always belonged to them, a fair share of attention from

trained educators and investigators. The future will justify the prediction that money thus expended is well invested. Let the good work go on. The work remains for poultrymen and poultry organizations everywhere to see to it that state and national funds for educational and investigational purposes be equitably proportioned to the various Agricultural interests. When that time comes, every Agricultural College and Experiment Station will have a well equipped, up to date poultry plant and some of these will rival the dairy and horticultural departments. The last census shows that in several states the value of the poultry products are greater than either the dairy or the horticultural products.

Permanent Prosperity of Poultrymen

BOTH editors and readers are fortunate in the fact that success with poultry is becoming more and more of a certainty and less of a gamble than formerly. Successful poultrymen, the Poultry Press, the Colleges and Experiment Stations, all are contributing to the systematizing of knowledge relating to poultry. All these forces are working toward the same end, that of eliminating the element of chance. Therefore the pou-

trymen and the editor alike have the advantage over those who have gone before them who were obliged to blaze the way.

This condition of prosperity and progress is due to many contributory causes. The poultry interests are sharing in the general condition of prosperity affecting most things agricultural. Better knowledge as well as higher prices is responsible for prosperity. By improved methods we have increased quality and decreased the cost of producing poultry products, thereby increasing the demand. However, the real basis for the large permanent demand for poultry products is the fact that they possess intrinsic merit of high eating qualities. The popular food product must both please the palate and satisfy the stomach without emptying the pocketbook. Poultry products for the most part satisfy these requirements. They are staples of life.

It is good business judgment to engage in the production of what the people want and cannot do without. The margin of profit for the food consumed and the labor required in the production of poultry and eggs, recommend it as a good safe business investment,—provided always that the one who manages the business knows how to handle it.

GENERAL AGRICULTURAL NEWS

Prof. Thos. F. Hunt has been appointed to take personal charge of the Traveling Summer School of Agriculture for the summer of 1906.

NEW YORK STATE GRANGE
Enthusiastic Meeting Held at Geneva, New York, February 6th-9th.

Nearly sixty of the students and members of the faculty of the Cornell

Agricultural College, including Pres. Schurman, Dean Bailey, Prof. Pearson and Messrs. Hosford, Parker, and Brill attended the 33rd session of the New York State Grange held at Geneva, February 6-9, 1906.

A feature of the program on Tuesday evening was an address by Pres. Schurman on "Public Opinion and Public Policies." Pres. Schurman addressed the members of the Grange not so much as farmers as citizens mak-

ing the point, that as the farmers comprise a large part of the voting interests of the country they should be especially interested in questions which relate to the welfare of the country as a whole.

Both the Railroad Rebate Bill, and the Mortgage Tax Bill were discussed at some length by President Schurman who contented himself with laying both sides of the question before the audience rather than drawing conclusions in favor of or against either measure.

The question of illiteracy of some of the farming population is a subject of especial interest to the Grange and was touched upon in his address.

The annual election of officers took place on Wednesday when G. A. Fuller was elected Master. Wednesday evening the proceedings were again of general interest and ex-Congressman Schurbert addressed the meeting on the Railroad Rate Legislation, a subject just now near and dear to the farmers' heart. Mrs. Parsons also gave an interesting talk on the School Gardens of New York. Mrs. Parsons

will be remembered by many of the *Countryman* readers from last year when she took an active interest in the School gardens of Ithaca.

The principal address of Thursday was that of A. S. Draper, Supt. of Public Instruction who gave an interesting talk upon Education in General. During the day the sixth degree was conferred upon 624 candidates, being the largest number yet given at any meeting. In the evening the annual banquet was held in the colliseum and a royal good time was reported by the guests. Friday's session was given over to business.

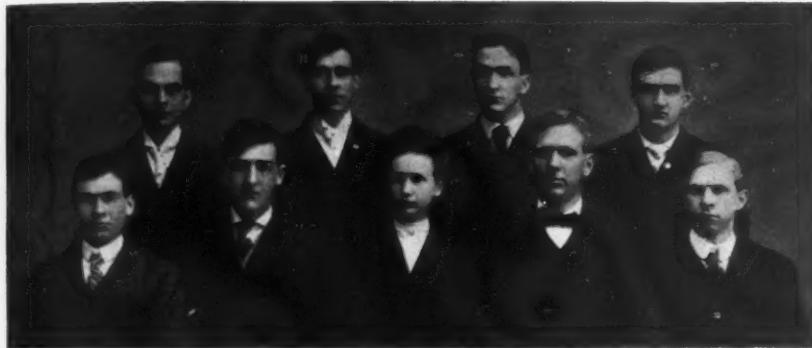
The most important matter which came before the Grange for consideration was the subject of introducing agricultural education into the secondary schools. A resolution was passed in favor of making the teaching of agriculture compulsory in the High Schools of the State.

The resolution was left in the hands of Charles Downing, who will take measures for the carrying out of the resolution.



Students Studying Poultry Feed.

CORNELL NEWS



Officers of the Cornell Poultry Association.

FREEMAN THAYER MARTIN MOODY
BOVCOURT GABLE MISS JENKINS JACKSON PRINCE

THE 1906 POULTRY SHOW

Reported by H. F. Prince, '07.

The third annual show of the Cornell University Poultry Association, held Feb. 14, 15 and 16, was the most successful since the existence of the Association.

The increase in registered attendance shows the need of some such show in Ithaca. The first year the attendance was 424, second year 509, and this year 631. This does not show the complete attendance as many failed to register.

By starting early, the sales of books and subscriptions to magazines, all former records were broken, the total amount being \$302.40. This has been in charge of Mr. Martin, the secretary of the Association, who has been very faithful. Fifty magazines and as many agricultural and poultry books gave the visitors a good variety to choose from.

The list of entries from outside of the University exhibitors was greatly increased. Among them were, O. L. Krum, Ithaca; Dr. Gallagher, Slaterville Springs; A. L. Jenks, Ithaca; E. G. Wyckoff, proprietor of Valley View Poultry Farm, Ithaca; R. D. Button, Canastota; W. R. Curtis & Co., Ran-

somville; A. G. Sincebaugh, Ithaca; C. H. Yapple, Richford; Truman Teeter, Etna; L. R. Hodges, Ithaca; G. L. Ferris, Atwater; E. S. Yauger, Ithaca; Brookside, Poultry Yards, Slaterville Springs; Jas. Dwyer, H. F. Prince, C. L. Opperman, George Wescott of Ithaca; Edith A. Wertz, Forest Home.

The scoring of the show was done by T. F. McGrew of New York City. In connection with the Poultry Show, Mr. McGrew gave a number of lectures on showing birds and an illustrated lecture Friday evening on "The History of the Breeds."

Added interest in the show was taken by the students, because of the "James G. Halpin prize of five dollars for the best student scoring." Mr. Halpin was president of the Association last year and is now instructor in poultry at Rhode Island Agricultural College. Ten varieties of birds were assigned to each student entering the competition. The score of Mr. McGrew, the judge, and those of the students were compared, both in regard to the total number of cuts, and as to where the cuts were given. We believe this to be the first prize given for student scoring of poultry.



Learning to Stick Poultry for Dry Picking.

A new departure was taken by the Association in admitting pet cats to the show. This was under the active supervision of Miss Vera French of Buffalo. Miss French was assisted in judging by Mrs. Geo. Gould of Ithaca.

Much praise is due Miss French for the admirable way in which she handled the cat exhibit, and the decided success of this new departure makes it probable that this feature will be emphasized next year.

Among the exhibitors were Mrs. Geo. H. Gould, 331 N. Geneva; Mrs. Leo. Baker, 310 N. Tioga; Dr. A. L. Andrews, 112 Sears St.; Mrs. Rhodes, 123 Park Place; Mrs. Owen, 205 Lake St.; Dr. Brown, W. Seneca St.; Miss Bessie Eberhart, 110 Reservoir Ave.; Mrs. Bennett, 1 Grove Place; Mrs. F. W. Rites, University Ave.; Mrs. Hitchcock, 211 Eddy St.; Miss V. R. French, Buffalo, N. Y.; Dr. B. G. Wilder, Cascadilla Place; Mr. C. L. Oppenman, Poultry Buldg.; Miss Bergen, Eddy St.; Mrs. Fay Allen, N. Geneva St.; Mrs. Brown, 133 Hazen St.; Miss Edna Vose, 705 E. Seneca St.; B. G. Fulkerson, N. Plain St.

The large number of varieties shown made it of great educational value. Among the varieties were

Barred, White, Partridge and Buff Plymouth Rocks; White, Silver Pencilled, Silver Laced, Gold Laced Partridge Wyandottes; Rhode Island Reds; Buckeyes; Light Brahmans; Buff, White and Partridge Cochins; White Langshans; S. C. White, R. C. White, S. C. Brown, S. C. Buff, S. C. Black Leghorns; R. C. White Minorca; Blue Andalusian; Colored Dorking; Red Cap; S. C. Buff Orphington; Black, G. P. and S. P. Hamburgs; Black-Breasted Red, Birchen, Red Pyle, Brown Red, Malay, Cornish Indian, Sumatras, Black Games; Black-Breasted Red, Red Pyle, Buff Cochin, White Cochin; Frizzles, Black Japanese Bantams; Pekin, Aylesbury, Rouen, Gray and White Calls, White Crests, Black and White Muscovy; Indian Runner Ducks and twenty varieties of Pigeons. The entries were in charge of L. B. Gable.

The directors in charge of the show were H. F. Prince, F. G. Thayer, L. B. Gable, C. E. Martin, Miss M. Jenkins, G. H. Moody, S. B. Jaskson, A. E. Boicourt, H. F. Freeman.

Without the aid and help of the Winter Course Students in Poultry, it would have been impossible to make it so great a success.

PRIZE WINNERS AT THE 1906 POULTRY SHOW

Judge T. F. McGrew of New York city did the scoring. The Poultry exhibited by students from the Cornell Poultry Dept. did not compete with those from outside.

Barred Plymouth Rocks, hens, L. A. Sheldon and W. F. Knight, thirds. Pullet, H. Morehouse, third. White Plymouth Rocks, cock, E. Shevalier and C. M. Kellogg, firsts; pullet, A. C. Herrick, third. White Wyandottes, cockrel, A. E. Boicourt, second. Part Wyandotte, hen, C. A. Huntley, first; cockerel, A. E. Boicourt, second. Evan Wheeler, third. Silver-laced Wyandotte, pullet, Edith A. Wertz, third. Light brahma, hen, A. L. Burnham, second; W. S. Lyon, third.

Brown Cochin, hen, R. P. Hopper, second. Brown Leghorn, hen, H. DeBell, second. Single comb White Leg-

horn, hen, E. Shevalier, W. B. Somers and L. D. Neisch, seconds; Edith A. Wertz, third; pullet, C. W. Joslin, first; W. G. Krum, second; F. S. Conger, third. Single-comb Brown Leghorn, cockerel, L. D. Neisch, second; hen, H. H. DeBell, third. Single-comb Black Minorca, cock, H. S. Ferris, first; hen, A. W. Silkworth, first.

Rouen duck, female, E. S. Reed, first. Muscovy duck, ducks, H. H. Harriman and H. F. Prince, firsts. drake, H. H. Harriman, first.

Langsham, cochin capon, first, W. H. Brigham. Pekin drake, first; Pekin duck, first, E. O. Lanning. Indian runner, drake, first; Indian runner duck, first, H. W. Freeman.

Prizes won by other than student exhibitors were as follows:

Plymouth Rocks, pullet, Truman



Class Scoring and Judging Fowls at the Annual Poultry Show.

Teeter, second; cock, E. G. Wyckoff, first; Truman Teeter, third; hen, E. G. Wyckoff, first. Single-comb Brown Leghorn, cockerel, J. Dwyer, first and second. White Lekhorn, hen, E. G. Wyckoff, first. Single-comb Buff Leghorn, hen, J. Dwyer and E. G. Wyckoff, firsts; cockerel, E. G. Wyckoff, first; cock, E. G. Wyckoff, first; pullet, A. G. Sincebaugh, first and second.

Capon, Pekin ducks, two firsts; white-crest pair, first; black muscovy, pair, first; mallard duck, first; mallard drake, first; white muscovy, pair, first; black Cayuga, pair, first; white call, second; gray call duck, second; all owned by R. F. Button.

Buff Cochin bantam, hen, first; cock, second; hen, second, O. L. Krum. Rouen duck, first; Rouen drake, first, R. D. Button. Spangled game bantam, cock, first; black fluff, hen, first; white Japa-

nese bantam, hen, first; cuckoo creeper hen, first, Brookside Poultry yards.

White Cachin bantam, hen, third, E. S. Yawger. Mr. Sincebaugh won a number of firsts, seconds and thirds on his exhibit of pigeons.

Black-breasted red game, cock, first; golden penciled Hamburg pullets, two seconds, C. H. Yaple. Gold-Wyandotte, cock, first, Brookside yards.

White Wyandotte, cock, second; White Wyandotte, hen, R. W. Curtis & Co. Silver penciled Wyandotte, pen, second; silver pencil'd Wyandotte, cockerel, third, A. L. Jenks. Pekin duck, pair, first, R. W. Curtis & Co.

Single-comb Brown Leghorn, pen, J. Dwyer, first; pair, Thomas Campbell, first; hen, J. Dwyer and E. S. Yawger, thirds; pullet, J. Dwyer, second. Single-comb White Leghorn, pair, E. G. Wyckoff, first; G. L. Ferris, second. Rose-

comb Brown Leghorn trio. A. G. Sincebaugh, first. Silver-penciled Wyandotte, E. G. Wyckoff, first. Silver-penciled Plymouth Rock, E. G. Wyckoff, first. Buff Indian game cockerel, Brookside Poultry yards, first; Col. Dorking, cock, first.

C. H. Yapple, won, exhibition game pullet, first; gold duckwing, second; Malay game cockerel, third; golden-laced Wyandotte, pullet, third; black game, cockerel, third; pullet, first and second; White Cochin, pullet, second; cock, third; Silver-spangled Hamburg, pullet, first, second and third; black breasted red game pullet, second and third; cockerel, third.

* * *

The students in the Winter Poultry Course have formed a permanent organization with Mrs. Edith Wertz as corresponding secretary.

* * *

Mr Bolye of Utah, '06, W. P. C., was awarded the James G. Halpin Prize for the year.

FORMER STUDENTS

'90, B. S. A.—James E. Rice entered Cornell University as a special student in Agriculture in the fall of 1886. He afterwards changed to regular, and graduated with the class of 1890. During his College course, he was entirely self supporting and managed one of the largest and most popular student boarding clubs of the time. Beside this work, he found considerable time to work upon the farm and in various other ways.

Throughout his College course he was very much interested in the cadet corp and drilled during the whole time. The last year he was the highest officer in the cadet corp. Notwithstanding all of these outside activities, his College work was done so well that he was elected to Sigma Xi.

His graduating thesis was on "The Effect of Foods on the Flesh of Fowls," and was so well done and complete that it was afterwards published as a part of one of the bulletins of the Agricultural Experiment Station.

From 1890 to 1893 Mr. Rice was a graduate student and assistant to the Professor of Agriculture, and during this time he gave a course of lectures to a volunteer class of students, this being, so far as is known, the first organized instruction in Poultry Husbandry ever given in an American Agricultural College.

In the spring of 1893 Mr. Rice formed a partnership with F. L. Mulford, a fellow student and graduate,



JAMES E. RICE, '90

and they engaged in farming on a fertile farm in Bucks County, Pennsylvania, near the city of Trenton. This venture, however, did not prove entirely successful, and in the following spring Mr. Rice moved to Yorktown, New York, and entered into partnership with his brother-in-law, Mr. Floyd Q. White, under the firm name of White & Rice. They purchased the paternal White homestead, then very much run down. They gave their attention from the start very largely to the production of fruit and poultry and, while at the start they were heavily handicapped financially, by energy, push, perseverance, and

good judgment, they were enabled to support themselves and families, to make many improvements on the farms and buildings, to materially decrease their indebtedness and to build up a series of remarkably productive orchards and one of the best bred and most profitable flocks of White Leghorn fowls in the country.

During this time Mr. Rice was occupied during the winters as a lecturer on the Farmers' Institute force of the state. He is an enthusiastic, forceful and pleasant speaker, and the effectiveness of his work on the institute force is second to none. He traveled all over the state of New York, speaking in every county and at several hundred different places. He is also engaged more or less in the same work in Maryland, in New Jersey and in Minnesota.

In 1903 he became Assistant Professor of Poultry Husbandry in Cornell University. Prof. Rice has, by his sincere sympathy, earnest friendship, and cheer, won his way straight to the hearts of all students, and the *Cornell Countryman* takes the keenest pleasure in leading a good husky Cornell Short Yell for "Jimmie Rice."

'04, Special—G. Farnsworth has a position with his uncle on a large stock ranch in Arizona.

'04, Special—Adam S. Hewettson, since leaving Cornell, has been engaged on a large ranch in the Northwest. He recently left there to engage in poultry farming in Washington.

'04, Special—F. V. Shearer writes enthusiastically of his love for Cornell. He is farming in his home town, Cortland, N. Y.

'04, Special—Henry Truckell finds life among the Holsteins on the Stevens' Stock Farm, at Lacona, New York, all that it is "cracked up to be."

'04, Special—H. S. Lippincott writes that he is undertaking a large poultry enterprise at Moorestown, New Jersey.

'04, Special—William W. Zimmer has made a marked record as an expert agricultural advertisement writer with the International Harvester Company of America; he has recently gone a step higher and is engaged on the editorial staff of White's Class Advertising Company, Chicago, Ill.

'05, W. P. C.—E. O. Britten is establishing a successful poultry plant at Manlius, New York.

'05, W. P. C.—Sarah Buchanan is employed at the Rhode Island Agricultural College.

'05, B. S. A.—James G. Halpin is instructor in Poultry Husbandry at the Rhode Island Agricultural College. He writes that they have 32 students enrolled in their Winter Poultry Course.

'05, W. P. C.—Wilbur J. Hunt has charge of the large poultry department at Hardcourt Farm, North Andover, Massachusetts.

'05, W. P. C.—Charles H. Lain has met with marked success during the past season in rearing several thousand chickens on the extensive poultry ranch of W. H. Miner at Chazy, New York, where they have a poultry building 283 feet long and 30 feet wide, costing \$17,000, and are now building one 425 feet long and 15 feet wide at a cost of \$10,000, also two brooder houses 200 feet by 30 feet.

'05, W. P. C.—Louis A. Ripley writes for a poultry manager for his extensive farms at Litchfield, Connecticut.

'05, B. S. A.—C. A. Rogers is on the home farm at Bergen, New York, working with enthusiasm. His specialties are fruit growing and poultry raising.

'05, W. P. C.—C. L. Roynar formed a partnership with his father at Manorville, Long Island, soon after leaving Cornell, where he is making a specialty of poultry.

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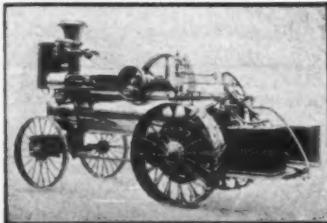
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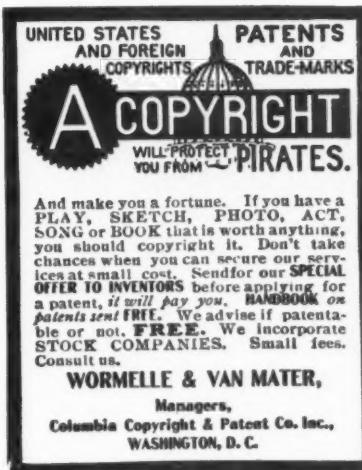
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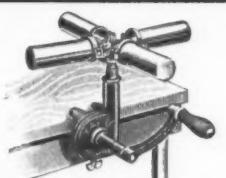
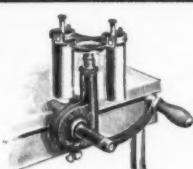
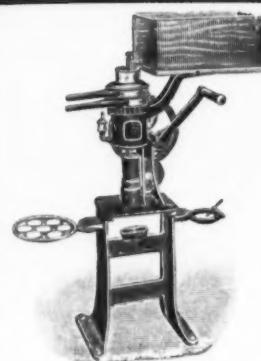
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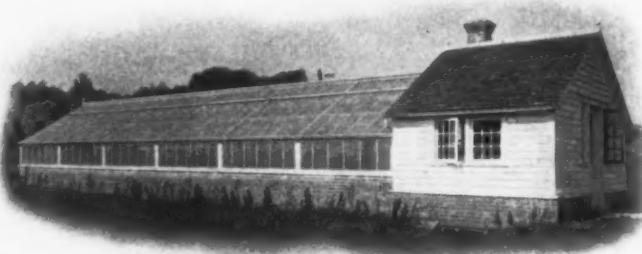
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TUBULAR--or "Back Breaker?"

When you see the waist low Tubular you can't be driven into buying a back-breaking, "bucket bowl" separator. **Can and crank are just the right height on the Tubular.** Here is the largest Dairy Tubular along side four "back breakers." The girl with her hand on the Tubular is 5 feet, 4 inches tall. This is an exact reproduction from a photograph. **Which kind for you?** Makers of "back breakers" try to get their cans low by setting the cranks low. **High cans break your back backward—low cranks break it forward.** Unless you are a double jointed giant, you'll find a high can is no joke. — To show you how high these "back breaker" cans really are, when the machines are set high enough to turn easily, we raised these "back breakers" 'til their crank axles were level with the Tubular crank axle. "Back breaker" makers don't like this picture—it's too true. They try to squirm out of it. **You wouldn't like turning cranks as low as "back breaker" makers put them.**

The low can is only one of many advantages Dairy Tubulars have over all others. Dairy Tubular bowls are simple—"back breakers" are complicated. Tubulars are self-oiling—no oil holes to fill up. "Back breakers" are oil drippers and oil wasters. To learn a lot more about Tubulars, write today for catalog N. D.



The
**Sharples Separator
Company**
West Chester, Pa.
Chicago, Ill.
Toronto, Can.